

Appl. No. 10/672,084
Amdt. Dated Jun. 23, 2005
Reply to Office Action of Mar. 23, 2005

REMARKS

Applicant appreciates the Examiner's indication of the allowance of claim 6.

Claim Rejections under 35 U.S.C. 102

Claims 1-5, 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Takada et al. (6,341,966).

Applicants respectively traverse the rejections about the independent claims 1 and 10 due to the following reasons.

An extender for use between two connectors disclosed in the independent claim 1 and claim 10 includes a frame having a body portion and **two receiving ports at opposite ends thereof adapted for respectively receiving said two connectors**, a circuit board attached to the body portion of the frame, the circuit board having conductive traces disposed along at least one side thereof and **opposite end portions respectively extending into the two receiving ports of the frame**.

In FIG 1 of Takada et al., each guide frame 30 comprises a C-shaped body section 31 and a guide section 32. The body section 31 consists of a column portion 31A and a pair of flange portion 31B and 31C to form the C-shaped structure. **A protruded end section 27 of the intermediate board 20 is put into a space in the C-shaped structure from the direction perpendicular to the sheet** (Column 4, Lines 17-23).

Apparently, the receiving ports of the independent claim 1 and claim 10 for receiving the two connectors are totally different from the C-shaped structure for receiving the intermediate board 20. Therefore, Claim 1 and Claim 10 are

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patentable over the cited prior art.

Claim 2 is dependent from claim 1 and defines two receiving ports are substantially identical. Claim 2 should be allowable since it is dependent from claim 1 directly.

In regard to claims 3 and 12:

Claim 3 and 12 respectively defines the frame comprising two side portions on opposite sides, **each side portion having two receiving sections at the same end of the frame defining the receiving port.**

In FIG. 1 of Takada et al., the body section 31 consists of a column portion 31A and a pair of flange portion 31B and 31C to form the C-shaped structure (Column 4, Lines 19-21). Guiding pins 32 and 33 extend upwardly and downwardly from the upper and lower flange portions 31B and 31C, respectively (Column 4, Lines 29-31). Apparently, **the flange portion 31B, 31C and the guiding pins 32, 33 can not form the two receiving sections disclosed in claim 3.** Claims 3 and 12 are patentable over Takada et al.

In regard to claims 4 and 13:

Claims 4 and 13 respectively discloses the circuit board having a pair of shoulders on opposite sides of each end portion, each shoulder ***abutting against the bottom*** of a corresponding receiving section of the frame. However, FIG. 4 of Takada et al. distinctly discloses that the circuit board has a pair of tapered surfaces stated by Examiner which is inserted into the guide frame 31. Apparently, the shoulders of applicant are absolutely different from the circuit board of Takada et al. Applicants now believe that the claims 4 and 13 are patentable over the cited prior art.

In regard to claims 5 and 14:

Claims 5 and 14 respectively discloses a protrusion being provided in each

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receiving section of the frame adapted for engagement with a corresponding groove of said connector. However, Takada et al. distinctly disclose that guiding pins 32 and 33 extend upwardly and downwardly from the upper and lower flange portions 31B, 31C and are put into guiding holes (not shown) in the housing 11 for positioning (Column 4, Lines 29-31, 34-35). Apparently, the protrusion absolutely differentiate the guiding pins 32 and 33 of Takada et al. Applicants now believe that the dependent claims 5 and 14 are patentable over the cited prior art.

In regard to claims 7-9:

Claims 7-9 should be allowable since they are dependent from independent claims 1, directly or indirectly.

In regard to claim 11:

Claim 11 should be allowable since it is dependent from claim 10, directly.

In regard to claim 16:

Claim 16 should be allowable since it is dependent from claim 10, indirectly.

In regard to claim 17:

Claim 17 discloses that the first and second contacts of the respectively first and second connectors including signal and ground contacts arranged in four rows, the signal contacts being arranged in two outer rows and the ground contacts being arranged in two inner rows, the ground contacts having tail portions in a same cross-section of said connector abutting against each other.

In FIG. 2 and FIG. 5 of Takada et al., two types of female terminals 14 and 15 stamped from metal sheet are attached to the housing 12 in two rows (Column 3, Lines 17-19). Apparently, the connector 10 of Takada et al. does not own the ground terminals being arranged in two inner rows cited in dependent claim 17.

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Claim 17 should be patentable over the cited prior art.

In regard to claim 18:

An electrical system defined therein comprises an extender located between the first and second connectors, the extender comprising a frame and a circuit board attached to the frame, **the frame defining two recessed receiving ports at opposite ends thereof for respectively receiving the first and second connectors therein, the circuit board having opposite end portions respectively extending into the first and second slots of the first and second connectors to allow conductive traces disposed thereon to electrically connect with corresponding first and second contacts of the first and second connectors.**

In FIG. 1 of Takada et al., the body section 31 consists of a column portion 31A and a pair of flange portion 31B and 31C to form the C-shaped structure (Column 4, Lines 19-21). Guiding pins 32 and 33 extend upwardly and downwardly from the upper and lower flange portions 31B and 31C, respectively (Column 4, Lines 29-31). Apparently, **the guiding pins 32, 33 cited by Examiner can NOT form/be the two recessed receiving sections disclosed in claim 18.** Applicants now believe that the independent claim 18 is patentable over the cited prior art.

Claim 19 discloses that at least one end of said extender is attached to one of said first and second PCBs. Claim 19 should be allowable since it is dependent from the independent claim 18, directly.

In regard to Claim 20:

An electrical connection system defined therein comprises the contacts disposed in one inner row and those corresponding ones in another inner row being **mechanically and electrically engaged with each other** in a transverse direction perpendicular to said longitudinal direction. In FIG. 2 of Takada et al., two types of female terminals 14 and 15 stamped from metal sheet are attached to the housing

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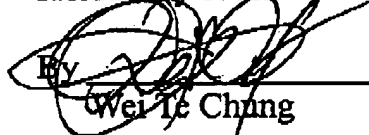
12 in two rows. Takada et al. does not disclose that the terminals 14, 15 of the connector 10 mechanically engage with each other in specification or drawings.

In addition, an electrical connector system of the present invention distinctly indicates that **the frame is fastened to another printed circuit board on which the housing is mounted**. However, FIG. 2 and FIG. 4 of Takada et al. distinctly discloses that the support member 40 merely support the electrical connectors 10 and is **NOT** mounted on any printed circuit board which the electrical connector is mounted. Applicants believe that the electrical connection system of the independent claim 20 is patentable over the cited prior art.

In view of the above claim amendments and remarks, the subject application is believed to be in a condition for allowance and an action to such effect is earnestly solicited.

Respectfully submitted,

Korsunsky et al.

By 
Wei Te Chung

Registration No.: 43,325

Foxconn International, Inc.

P. O. Address: 1650 Memorex Drive,
Santa Clara, CA 95050

Tel No.: (408) 919-6137